

-1- (JAPIO)
ACCESSION NUMBER
TITLE

PATENT APPLICANT
INVENTORS

PATENT NUMBER
APPLICATION DETAILS
SOURCE

INT'L PATENT CLASS
JAPIO CLASS

ABSTRACT

91-033014
PRODUCTION OF FINE ZINC OXIDE POWDER FOR ALKALINE
STORAGE BATTERY
(2329023) SUMITOMO METAL MINING CO LTD
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91.02.13 J03033014, ~~XXXXXXXXXX~~
89.06.30 89JP-166527, 01-166527
91.04.24 SECT. C, SECTION NO. 826; VOL. 15, NO. 163,
PG. 31.
C01G-009/02; H01M-004/42
13.2 (INORGANIC CHEMISTRY--Inorganic Compounds); 42.9
(ELECTRONICS--Other)
PURPOSE: To prolong cycle life by bringing fine ZnO
powder with stuck In(OH)(sub 3) into contact with
Tl(NO(sub 3)3) and heating them in an oxidizing or
inert atmosphere.
CONSTITUTION: An In(NO(sub 3)3) soln. having 10-50g/l
concn. is added to an aq. slurry obtd. by dispersing
fine ZnO powder in water under stirring and they are
mixed. The pH of the mixture is raised to 7-8 by
adding an alkali such as ammonia to deposit In as In
hydroxide and the mixture is filtered to obtain fine
ZnO powder with stuck In(OH)(sub 3). A Tl(NO(sub 3)3)
soln. having 20-130g/l concn. is added to the fine
ZnO powder while kneading the powder and they are
dried at 100-200 Deg.C, crushed and heated to 500-800
Deg.C in an oxidizing or inert atmosphere. By this
heating, the Tl(NO(sub 3)3) is decomposed and fine
ZnO powder for an alkaline storage battery uniformly
coated with 1-5wt.% (expressed in terms of In)
In(OH)(sub 3) and 0.2-3wt.% (expressed in terms of
Tl) Tl(sub 2)O(sub 3) is obtd.